

Bar Code Medication Administration (BCMA)

BCMA Backup System (BCBU)

InterSystems Caché Installation Setup



Version 3.0

December 2019

Department of Veterans Affairs (VA)

Office of Information and Technology (OIT)

Product Development (PD)

Revision History

Date	Revision	Description	Author
12/2019	PSB*3*122	Document updated for Cache version 2017	REDACTED
04/2015	PSB*3*84	Document updated by Kevin Cownie. Entire document reformatted.	REDACTED
07/2011	PSB*3*65	Footers updated; removed HSITES and added Product Development, removed Vista. Renamed instances of CACHE to Caché throughout the document. Updated version to reflect BCMA v3.0 version.	
08/2003	PSB*2*17	Original Released Bar Code Medication Administration Backup System (BCBU) InterSystems Caché Workstation Installation Setup Guide.	

Revision History

Table of Contents

1	Overview	1
1.1	General Background Information	1
1.2	Prerequisites	1
2	Retrieve the Files Needed to Perform this Upgrade	2
2.1	Command Prompt SFTP	3
3	Unzip the file	4
4	InterSystems Caché Installation/Upgrade	6
5	First Time Installation	10
5.1	Caché Configuration Manager	15
5.1.1	Adding a Database	16
5.1.2	Adding a Namespace	19
5.1.3	Global and Routine Mapping	21
5.1.4	Global Mapping	22
5.1.5	Routine Mapping	23
5.1.6	Cache Licenses install	25
5.1.7	Cache DAT File install	25
5.1.8	Moving ZSTU routine	26
5.2	Setting up Terminal Users	29
5.3	Verify certain parameters are set for proper operation	31
5.4	Setting up the BCMA Shortcut	31
5.4.1	Setting up the printer for use with BCBU	34
5.4.2	Edit a TRM or VTRM device	34

1 Overview

This document contains instructions for the Upgrade to Caché 2017 on Microsoft Windows workstations.

1.1 General Background Information

These instructions are specific to installing Caché on Windows workstations for the use of Caché with BCMA Backup system (BCBU).

1.2 Prerequisites

Installation requires administrator privileges through local admin account logon or via user's token with admin rights to the machine.

2 Retrieve the Files Needed to Perform this Upgrade

The following table identifies the file required for the installation.

Table 1: Installation Files

File Name	Download Type
cache-2017.2.2.865.0-win_x64.exe (Windows 64-bit)	Binary

The files can be downloaded from Vista at, download.vista.med.va.gov, or retrieved via secure file transfer protocol (SFTP) from the following locations:

Table 2: OI Field Offices

Field Office	DNS Address
REDACTED	REDACTED
REDACTED	REDACTED

Use SFTP mode to transfer the required file. There are several ways this file can be downloaded. An example of performing an SFTP and download of the distribution is shown in section 2.1.

2.1 Command Prompt SFTP

The following is a sample screen dialogue of the file retrieval using the Command Prompt.

1. Open a Windows Command Prompt Session (START > enter CMD in the search programs and files box, right click on CMD and Run As Administrator). Note: etoken may be necessary and privileges may only be necessary depending on directory you download to.
2. Set the default to the target directory.
3. Verify the bytes received are the same size noted as the SFTP transfer size.

Note: Commands are highlighted in **Bold Red** and **vhausername** is your VA login

```

Microsoft Windows [Version 6.1.7601
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\vhausername>
C:\Users\vhausername>cd Desktop
C:\Users\vhausername\Desktop>
...Desktop>sftp -o StrictHostKeyChecking=no anonymous@download.vista.med.va.gov

      HOST ON LINE OpenVMS AXP (TM) Operating System, Version V8.3

Enter password for anonymous@download.vista.med.va.gov: <leave blank hit enter>
/$1$dga105/anonymous>cd cache/cache2017
/$1$dga105/anonymous/cache/cache2017>ls
CACHE-2017_2_2_865_0-WIN_X64.ZIP;1
CACHE-2017_2_2_865_0-WIN_X86.ZIP;1
/$1$dga105/anonymous/cache/cache2017>binary
Transfer mode set to binary
/$1$dga105/anonymous/cache/cache2017>get CACHE-2017_2_2_865_0-WIN_X64.ZIP
<Note Status will show as downloading and after complete>
Downloaded /$1$dga105/anonymous/cache/cache2017/CACHE-2017_2_2_865_0-WIN_X64.ZIP
to C:\Users\vhausername\Desktop\CACHE-2017_2_2_865_0-WIN_X64.ZIP (438.51mB 1.0
2mB/s 00:07:11)
/$1$dga105/anonymous/cache/cache2017>exit
Connection closed to download.vista.med.va.gov
C:\Users\vhausername\Desktop\

```

4. If there is a large difference in the file size downloaded to your workstation, the file did not transfer correctly and the download should be performed again.

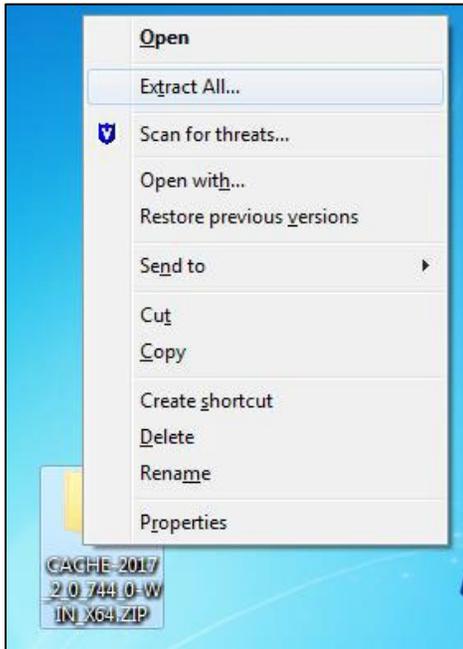
Unzip the file

3 Unzip the file

Extract CACHE-2017_2_2_865_0-WIN_X64.ZIP as follows:

1. Open the file menu and select **Extract All**.

Figure 1: Extract All File Menu Option



2. It will make a cache 2017 folder on the desktop during extraction, select **Extract**.

Figure 2: Pre-Extraction Dialog Box

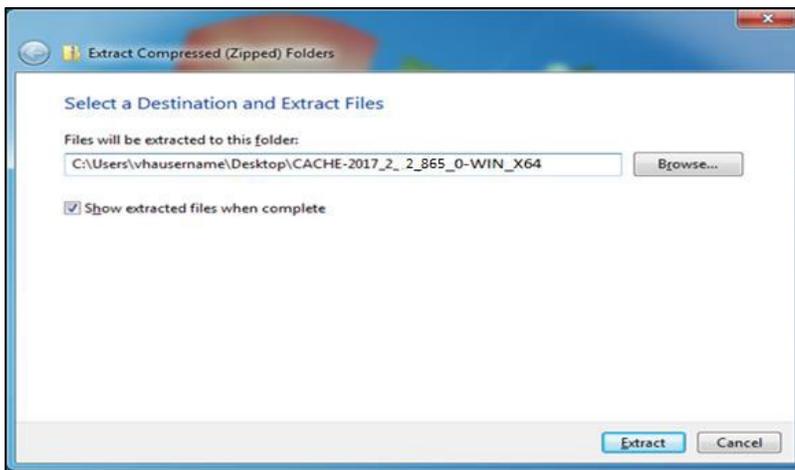
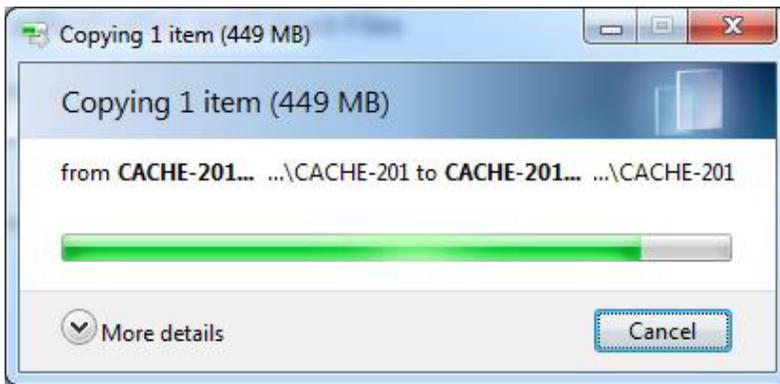
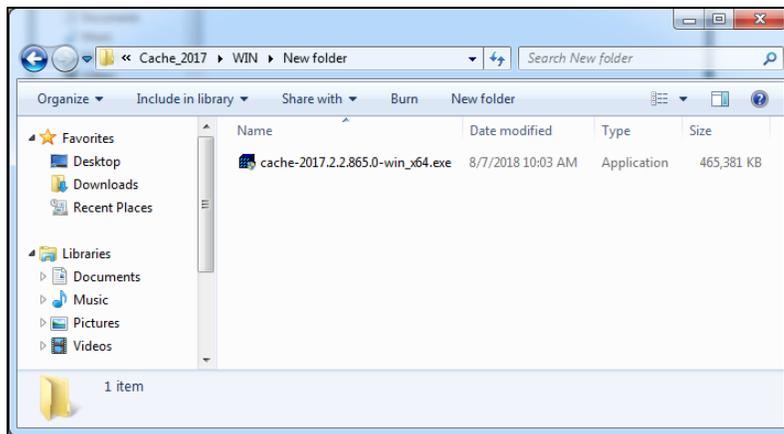


Figure 3: Extraction Process Progress Bar



3. A popup window will show the executable when extraction is complete.

Figure 4: Post-Extraction File Folder

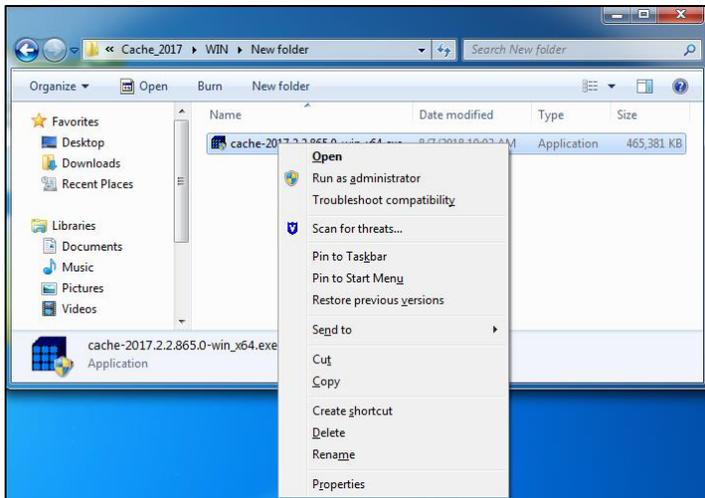


4 InterSystems Caché Installation/Upgrade

This section illustrates step-by-step installation of Caché v2017 for use with Bar Code Medication Administration Backup System (BCBU) workstations. Using the newly extracted file folder (C:\Users\vhausexname\Desktop\CACHE-2017_2_2_865_0-WIN_X64), complete the following:

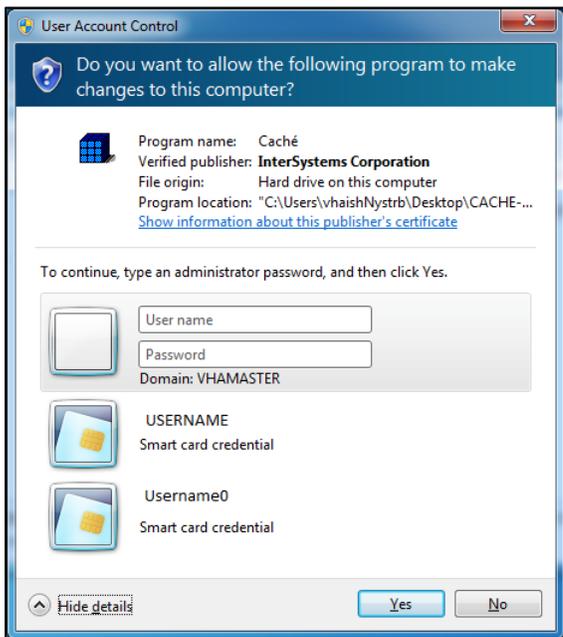
1. Open the file options menu for, **cache-2017.2.2.865.0-win_x64.exe**, and select Run as Administrator

Figure 5: File Options Menu for the Extracted File



2. The user will have to select the appropriate etoken account or enter an administrator account and password.

Figure 6: User Account Control



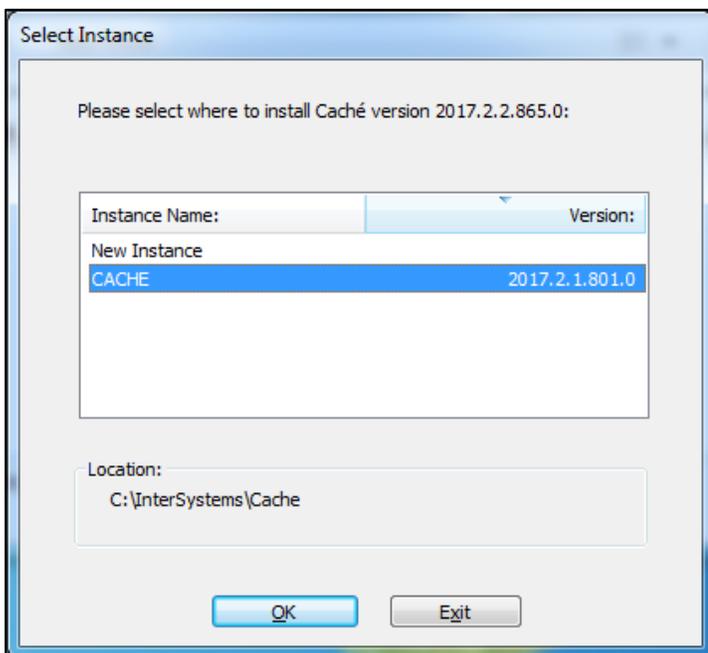
- If the Windows user account being used does not have required administrator privileges to perform this installation, the following dialog will be displayed. At which point the user will need to seek assistance from a privileged workstation administrator.

Figure 7: Not Having the Proper Privileges for Installation



- If the proper credentials are recognized, then proceed with the New Installation.
Note: If this is a **FIRST TIME** installation of any version of Caché on your workstation, proceed to the First Time Installation section.
- If this is an upgrade installation, select the Instance Name to be upgraded and then select **OK**.

Figure 8: Select Instance Dialog Box



6. Select **Upgrade** to begin.

Figure 9: Upgrading Instance Cache Options

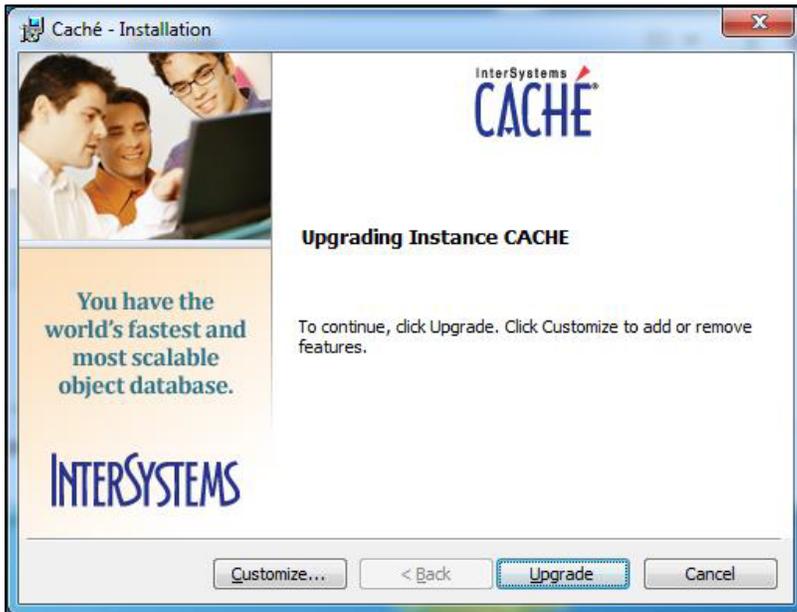
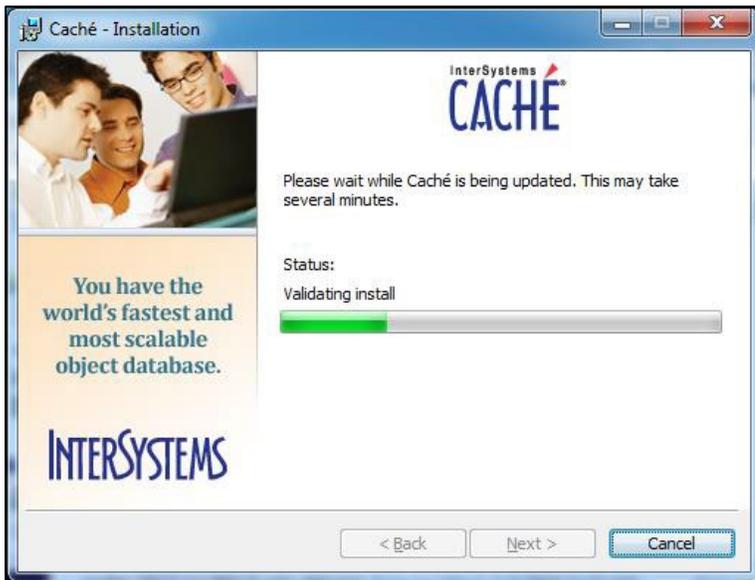
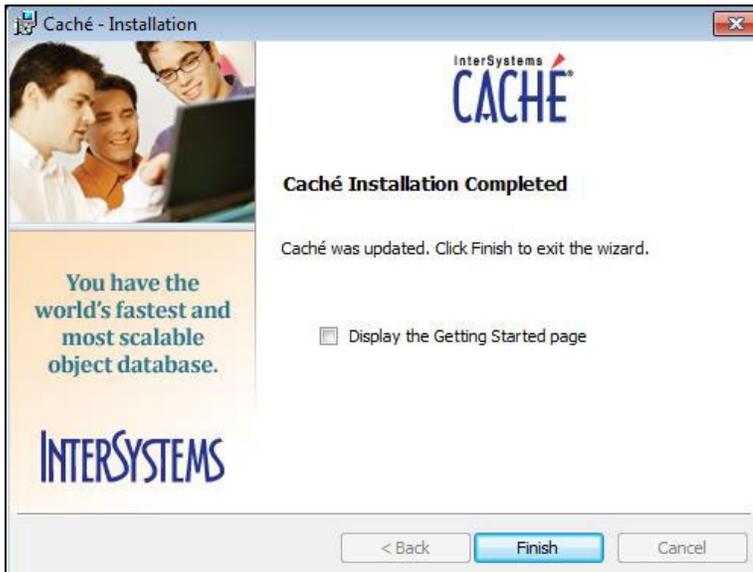


Figure 10: Cache Updater in Progress



7. Select **Finish**.**Figure 11: Installation Complete**

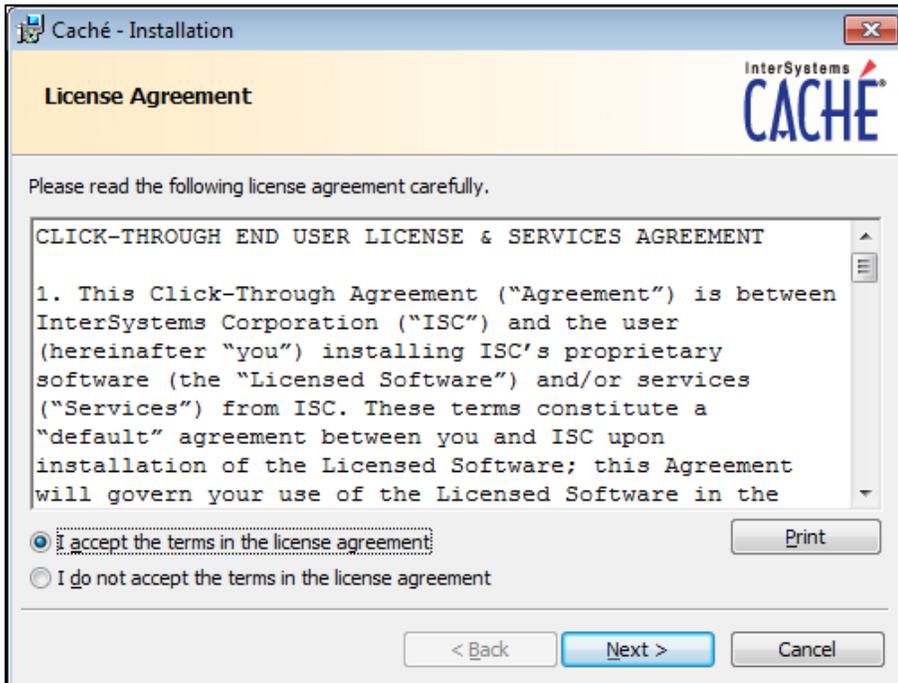
At this point Cache has been upgraded to version 2017 and no changes or additions should be needed. Start Cache back up by opening the Cache cube's menu options in the system tray and selecting **Start**.

Note: This is optional. Once installation is complete, the zip file and Cache 2017 folder can be deleted from the desktop; if copies are needed again they can be downloaded again.

5 First Time Installation

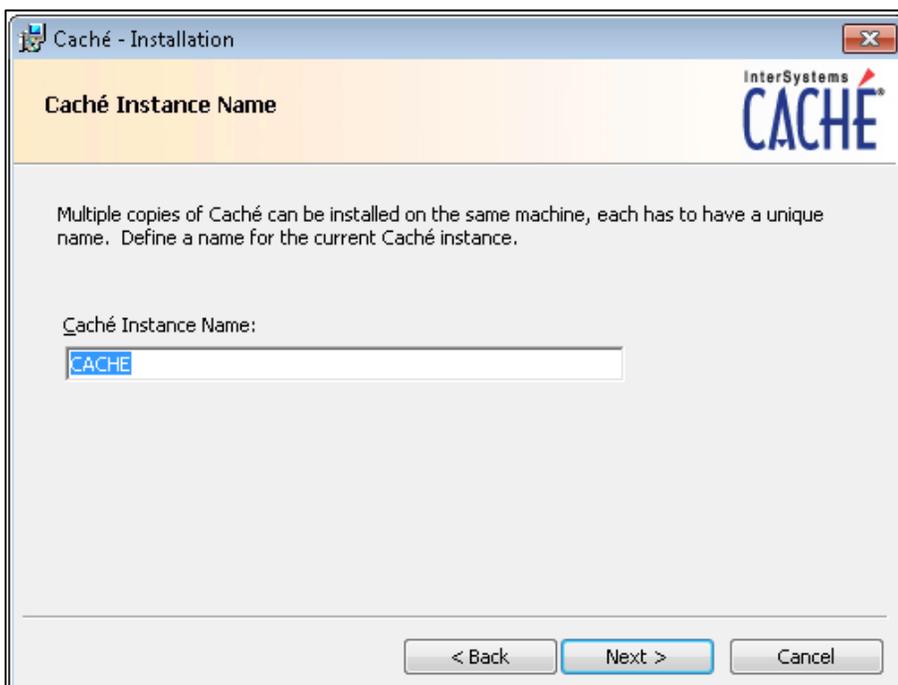
1. Run the install executable
2. Agree to the License Terms and select **Next**.

Figure 12: License Agreement



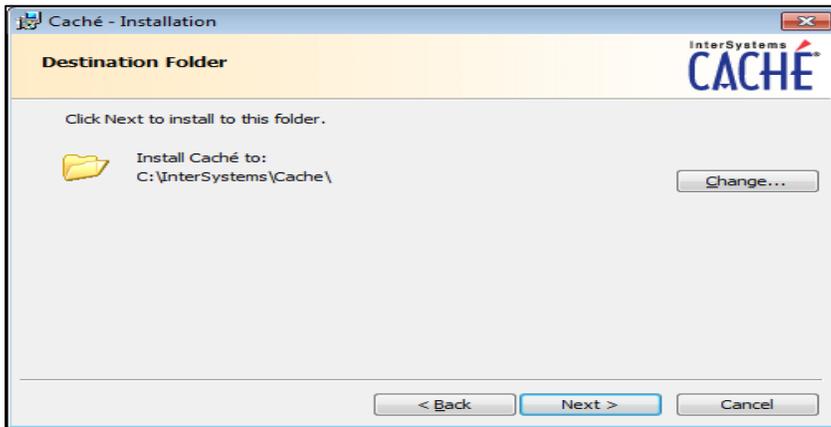
3. Select **Next** at the Define Cache Instance Name (Default name should be CACHE).

Figure 13: Cache Instance Name



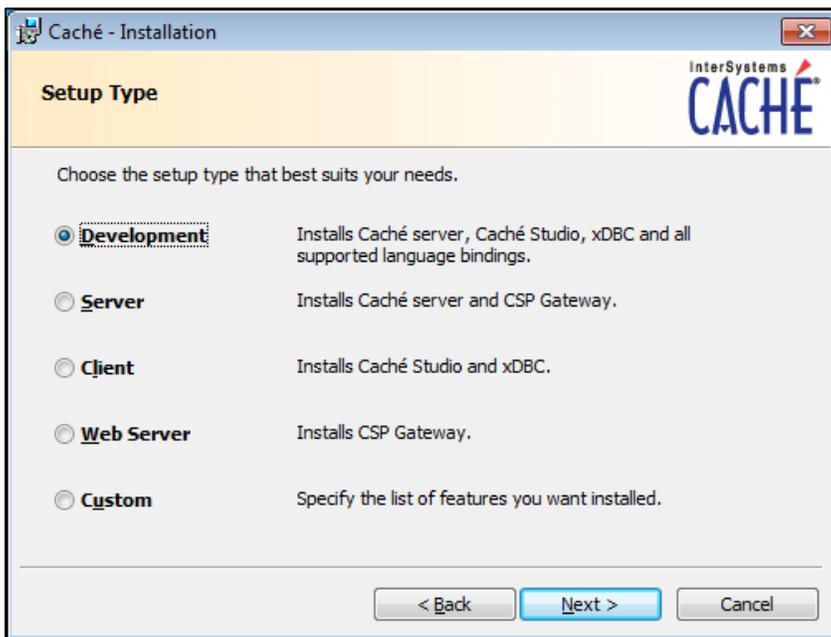
4. Select **Next** at the Destination Folder (keep default).

Figure 14: Destination Folder



5. Choose **Development** and select **Next**.

Figure 15: Setup Type



- Continue following the instructions and accept the system defaults.

Figure 16: Install Unicode Support?

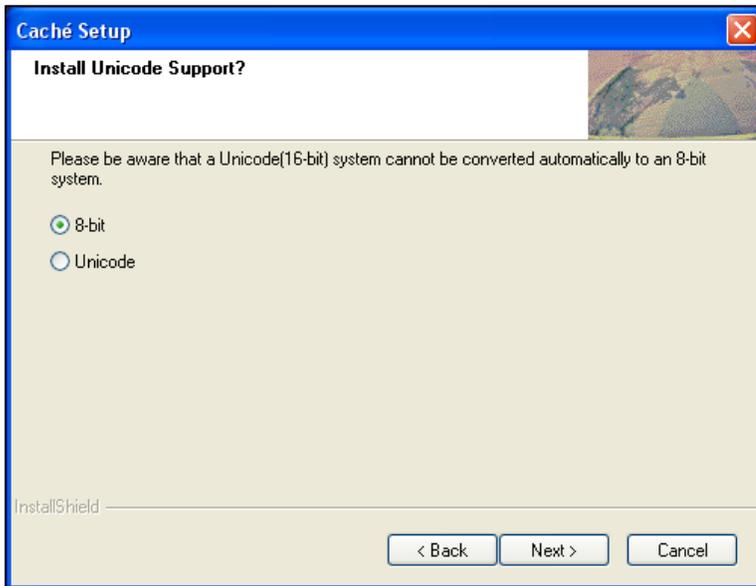
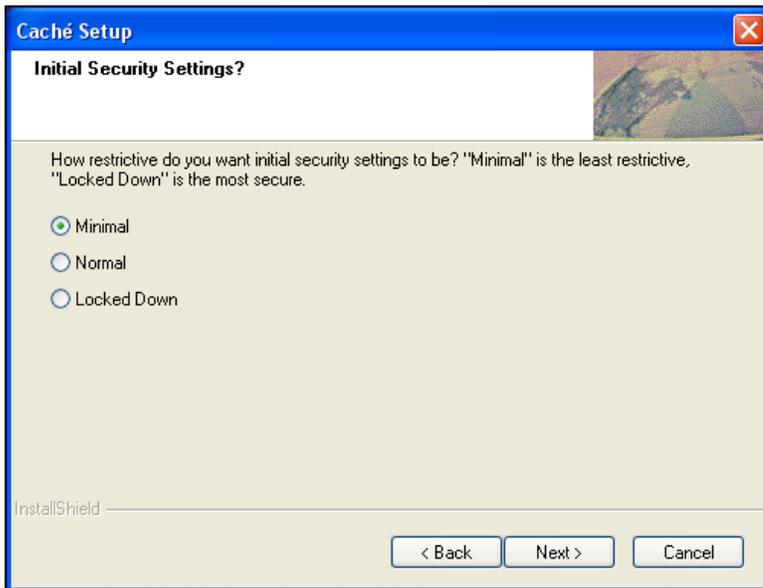
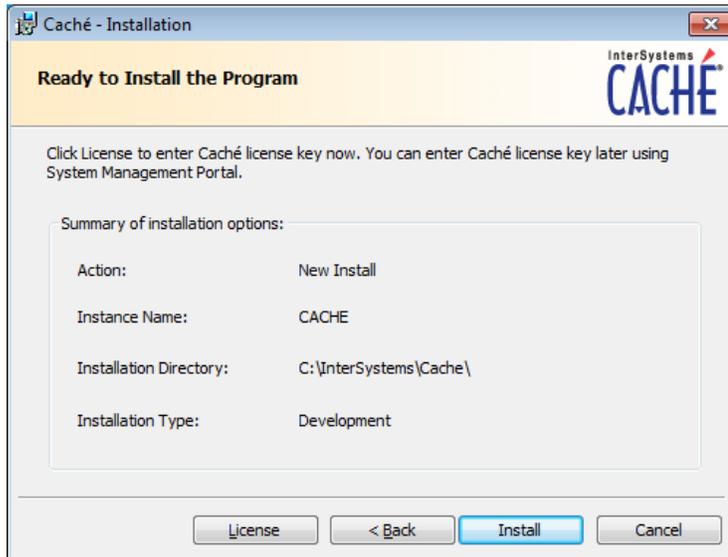


Figure 17: Initial Security Settings?



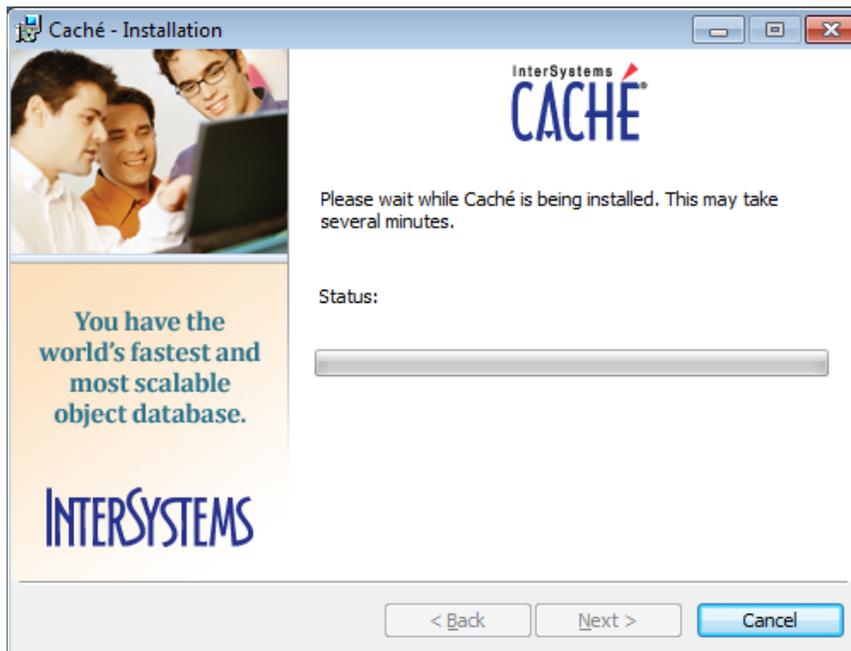
7. Select **Install**.

Figure 18: Ready to Install the Program



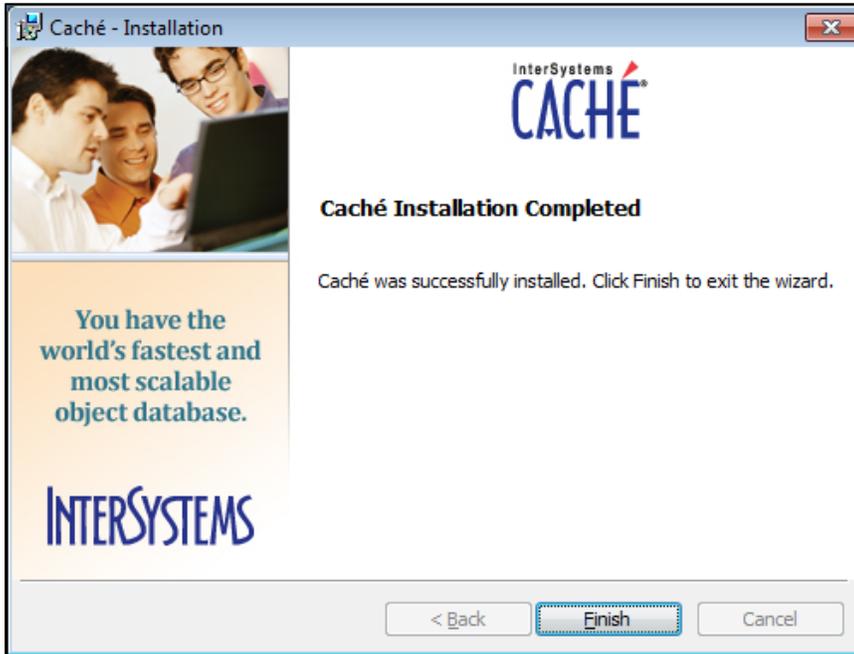
8. Status bar will show during installation.

Figure 19: Installation Status Bar



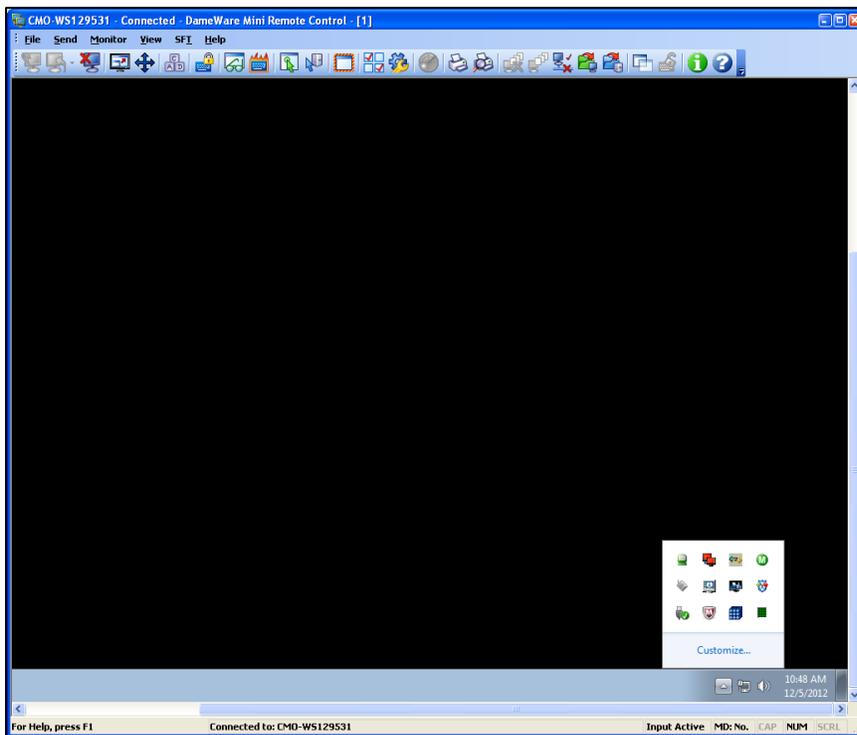
9. Select **Finish**.

Figure 20: Installation Complete



After a successful installation, a **Blue Cube** will appear in the System Tray in the lower right hand corner of the screen.

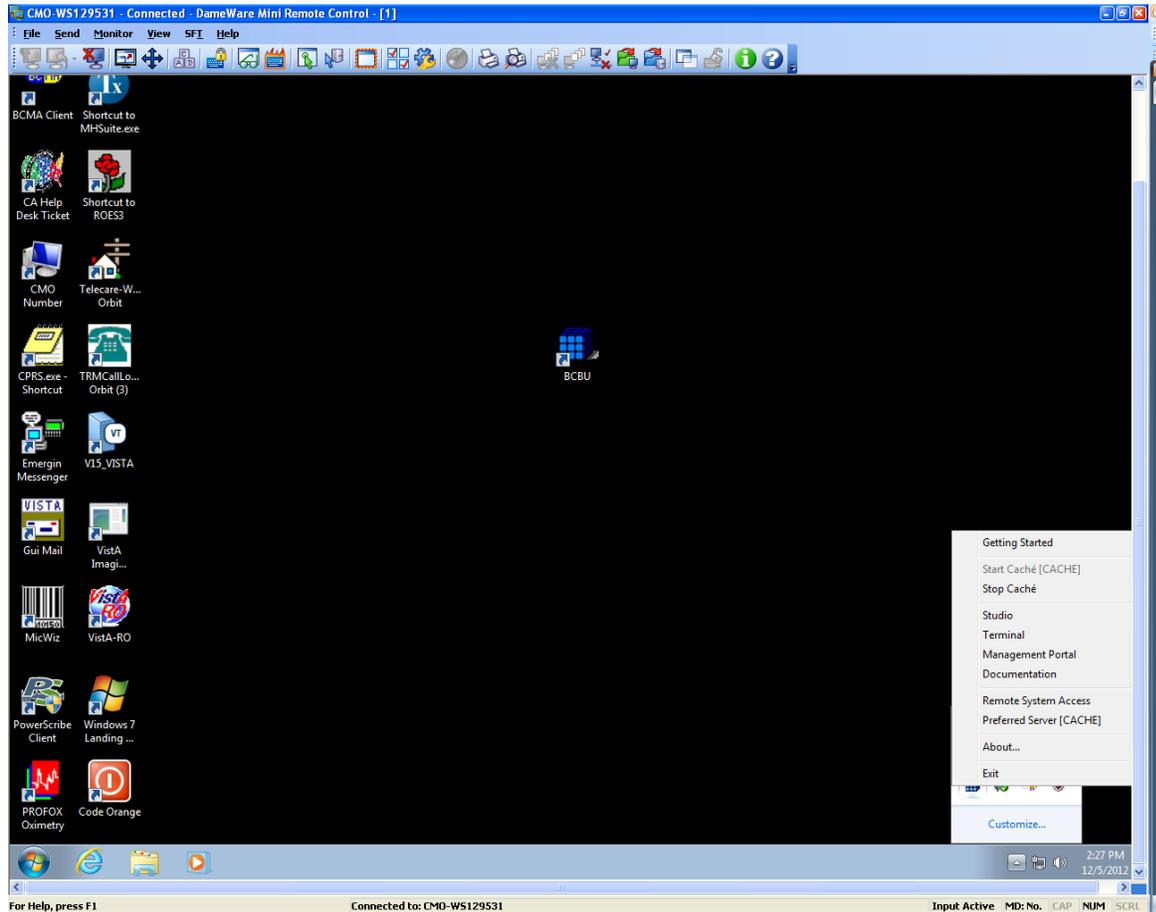
Figure 21: Blue Cube Location



5.1 Caché Configuration Manager

Caché must be configured with databases, namespaces, and routines by using the Management Portal located in the Caché cube's menu options. Open the Caché cube's menu options and select **Management Portal**.

Figure 22: Caché Management Portal

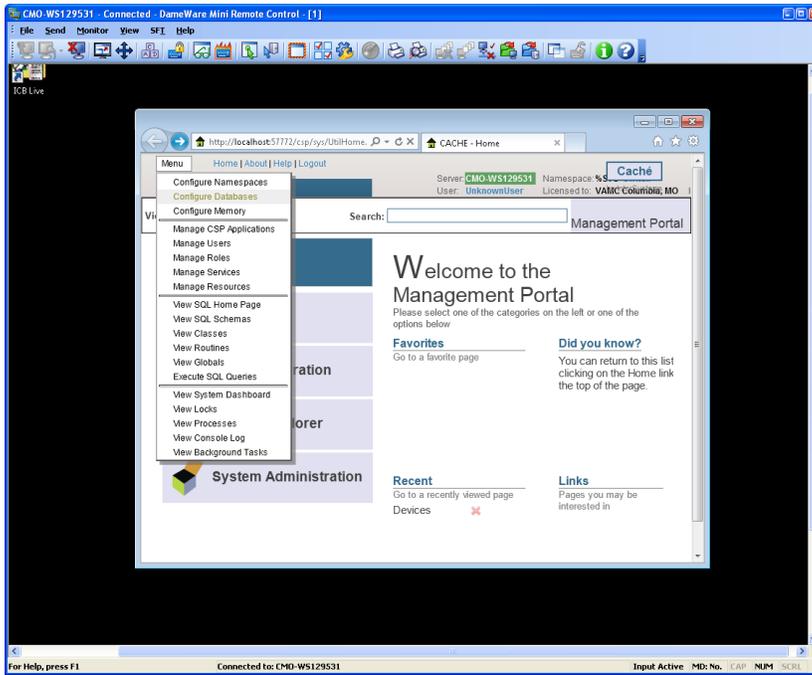


5.1.1 Adding a Database

The first step is to add a Database.

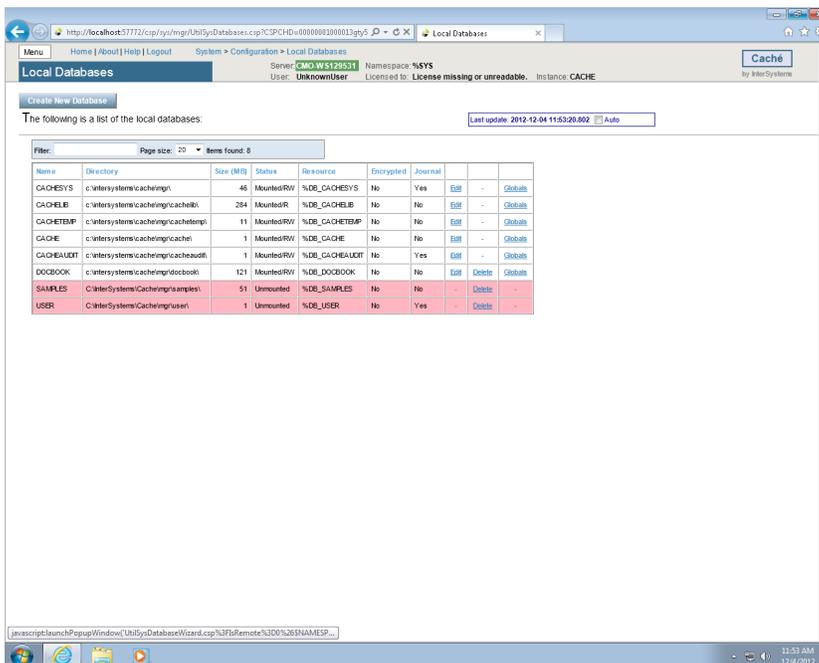
1. From the main screen, select **Menu**, then select **Configure Databases**.

Figure 23: Database Configuration



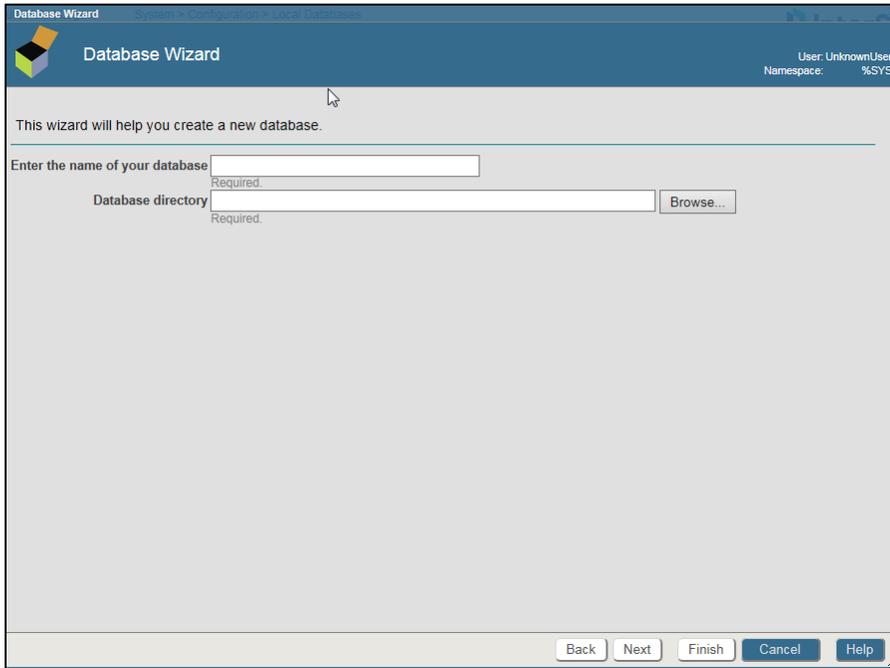
2. Select **Create New Database**.

Figure 24: Create New Database



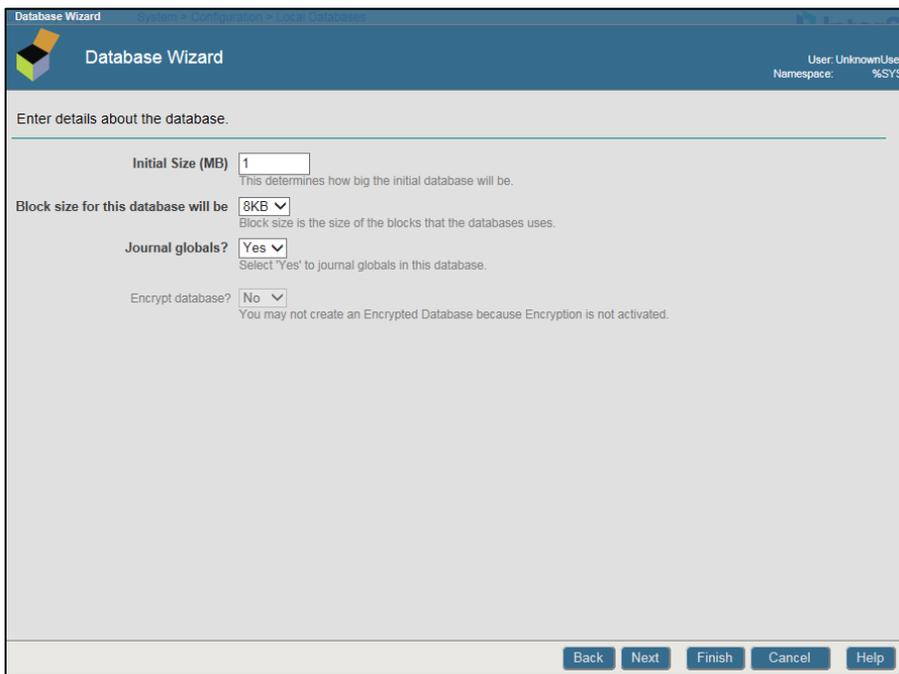
3. Enter **VISTA** as the name of the database and enter **C:\BCMABU** into the Database Directory field. Select **Next** to continue. If that folder doesn't exist, the user will be prompted to create it, answer **Yes**.

Figure 25: Create New Database



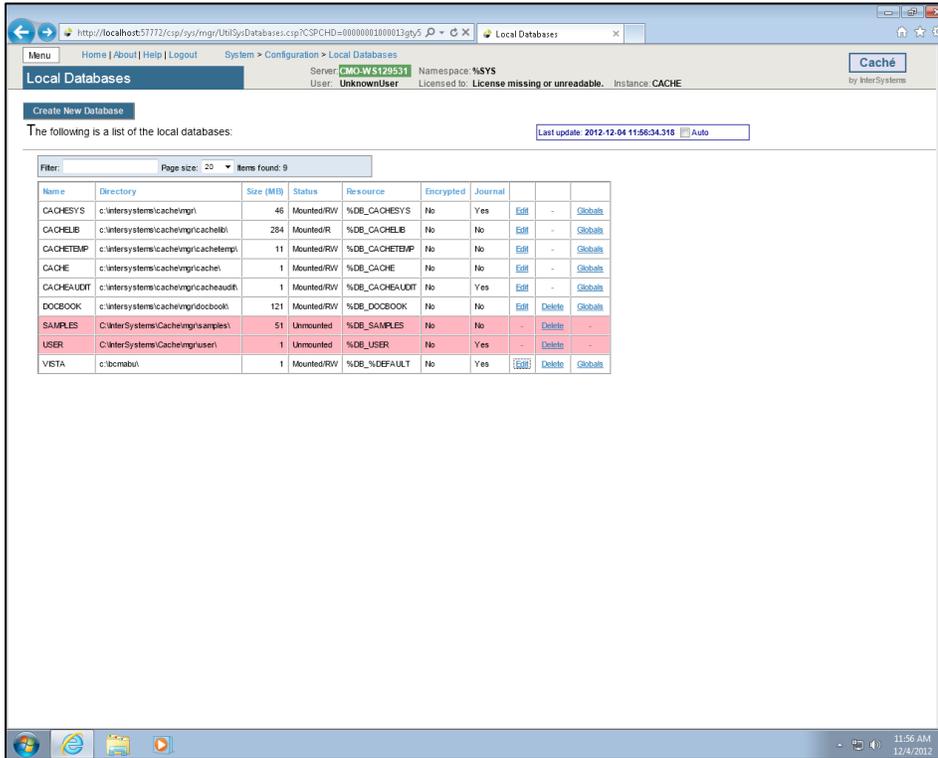
4. Verify the values entered are correct and select **Finish**.

Figure 26: Database Details



- The newly created database should now appear in the list (bottom of the list) with C:\BCMABU\ as its directory.

Figure 27: Local Database List

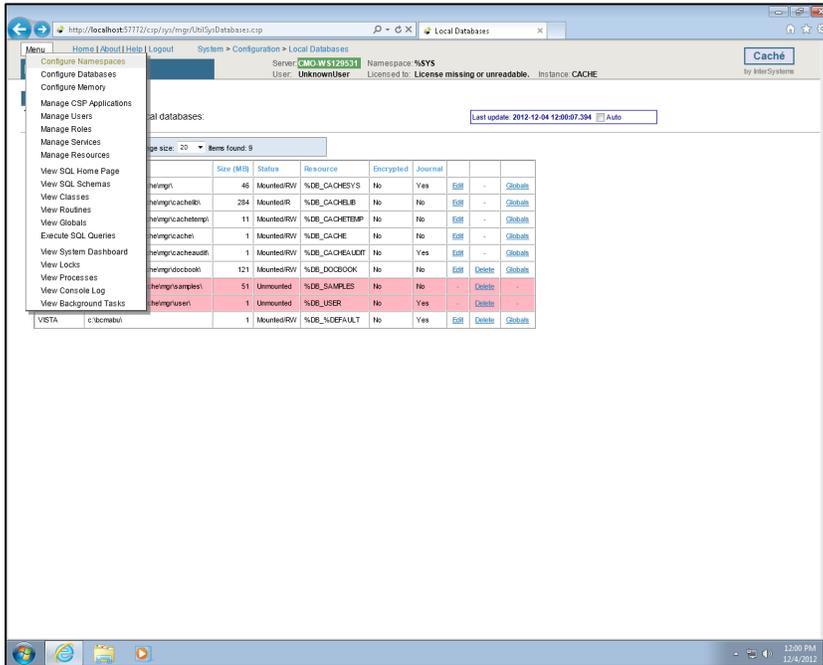


5.1.2 Adding a Namespace

Creating the Namespace VISTA and attach it to the VISTA database.

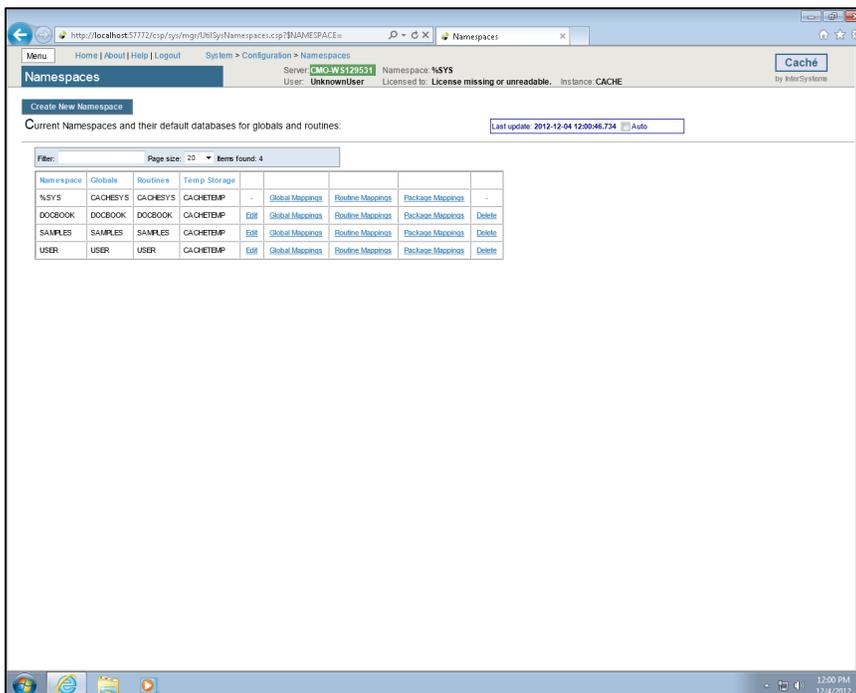
1. From the main screen, select **Menu** and then select **Configure Namespaces**.

Figure 28: Configure Namespaces



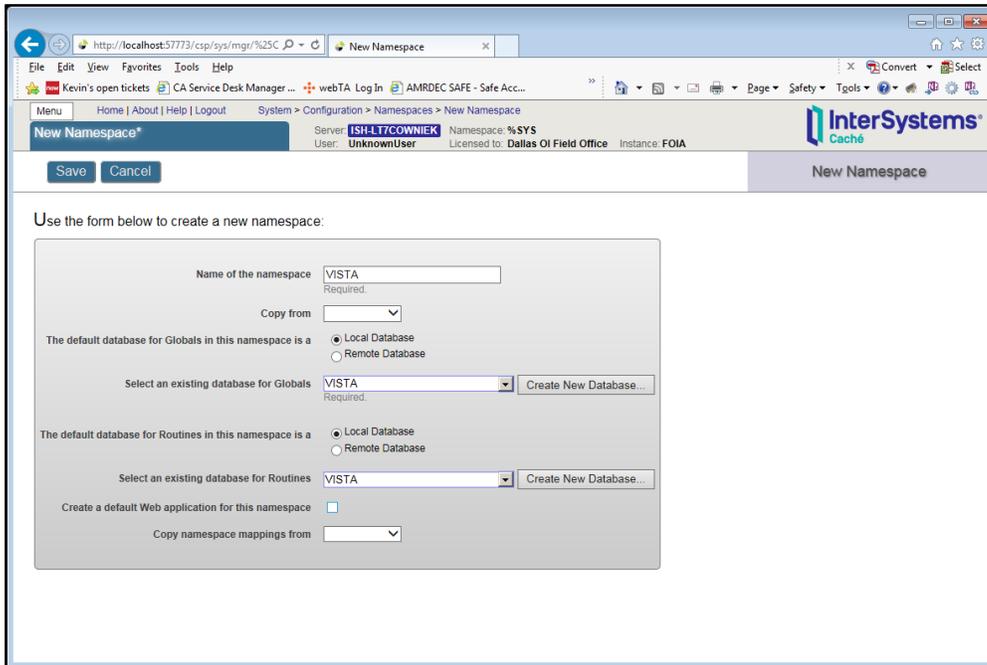
2. Select **Create New Namespace**.

Figure 29: Create New Namespace



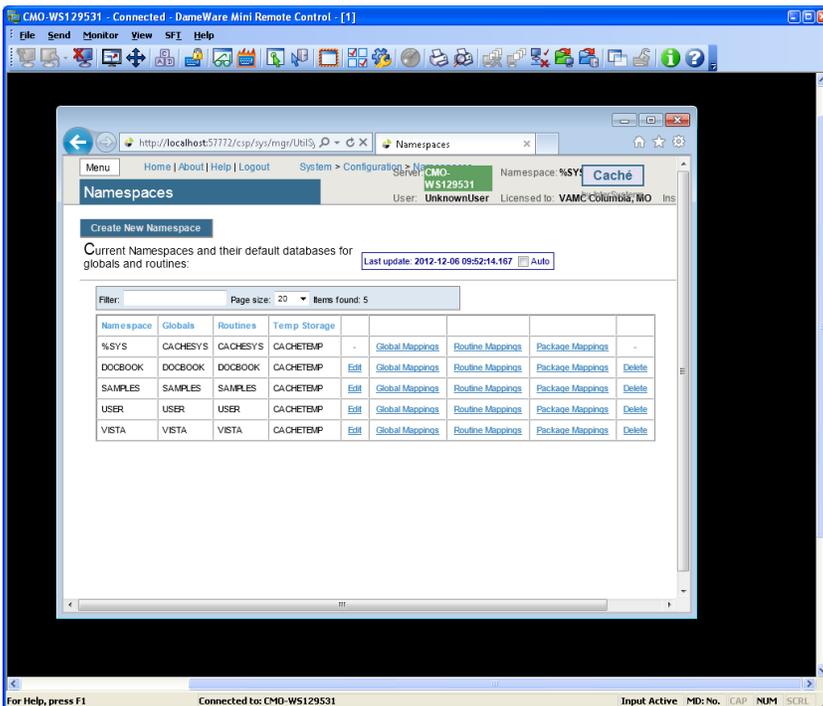
3. Enter **VISTA** as the Namespace and select **VISTA – C:\BCMABU** as the existing database for Globals and Routines. Uncheck Create a default Web application for this Namespace. Select **Save**.

Figure 30:



4. The VISTA Namespace should be seen in the listing of Caché Namespaces.

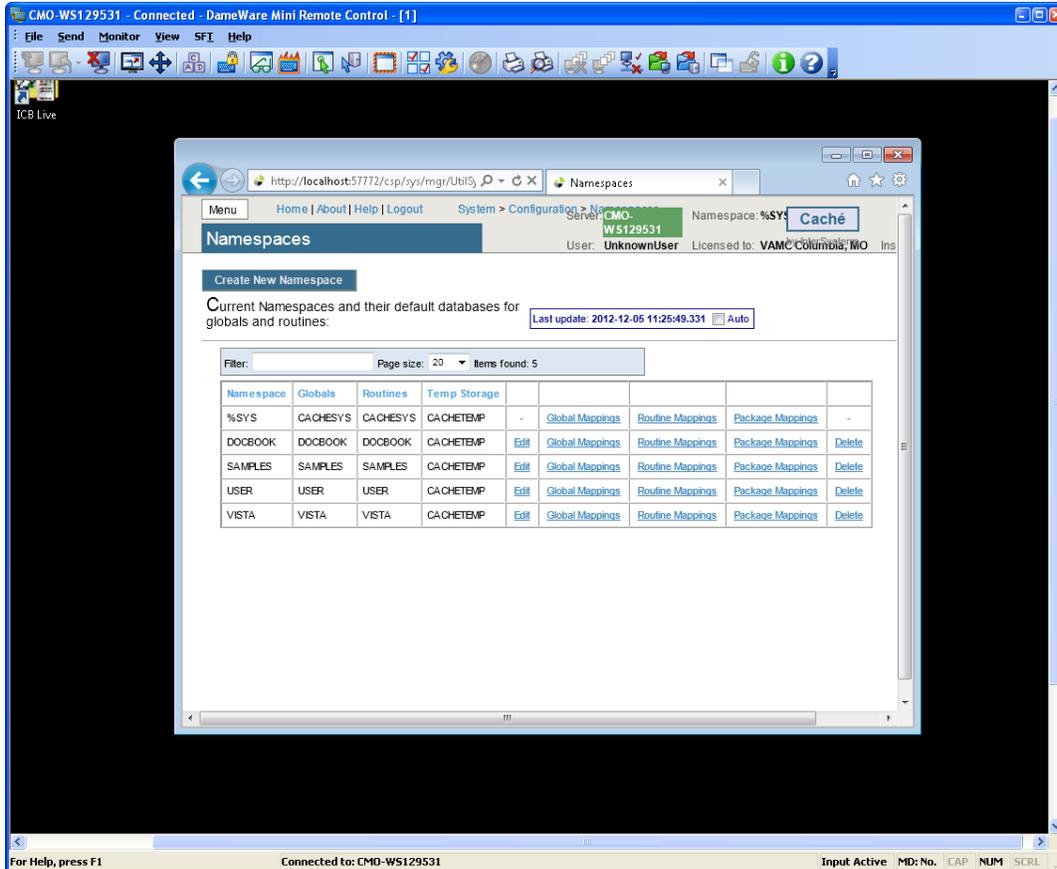
Figure 31: List of Namespaces



5.1.3 Global and Routine Mapping

Global and Routine Mappings are created under the Configuration Namespaces option by selecting Global Mappings and Routine Mappings for the VISTA Namespace.

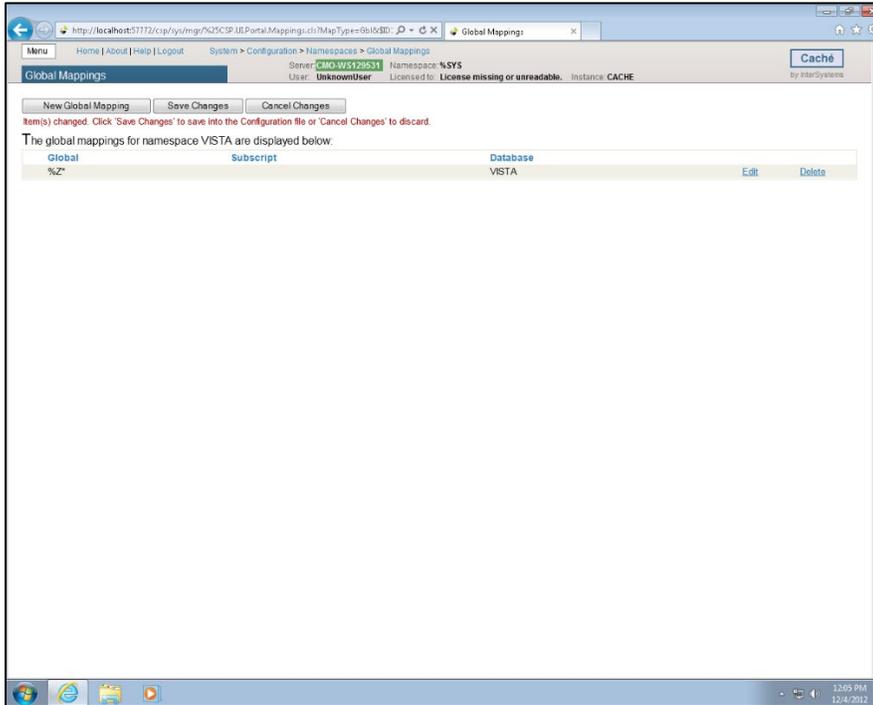
Figure 32: Global and Routine Mapping



5.1.4 Global Mapping

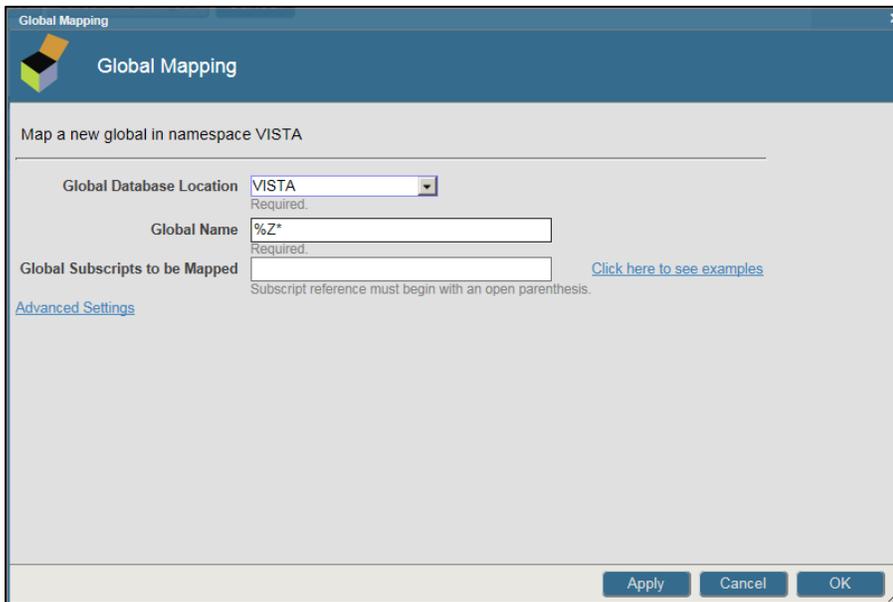
1. Select **Global Mappings** for the VISTA Namespace. Then select **New** to create the global mapping definition as shown in the following slide.

Figure 33: Global Mapping Screen



2. The Global Database Location is **VISTA** and the Global name is **%Z***. Select **OK** and **Save Changes**.

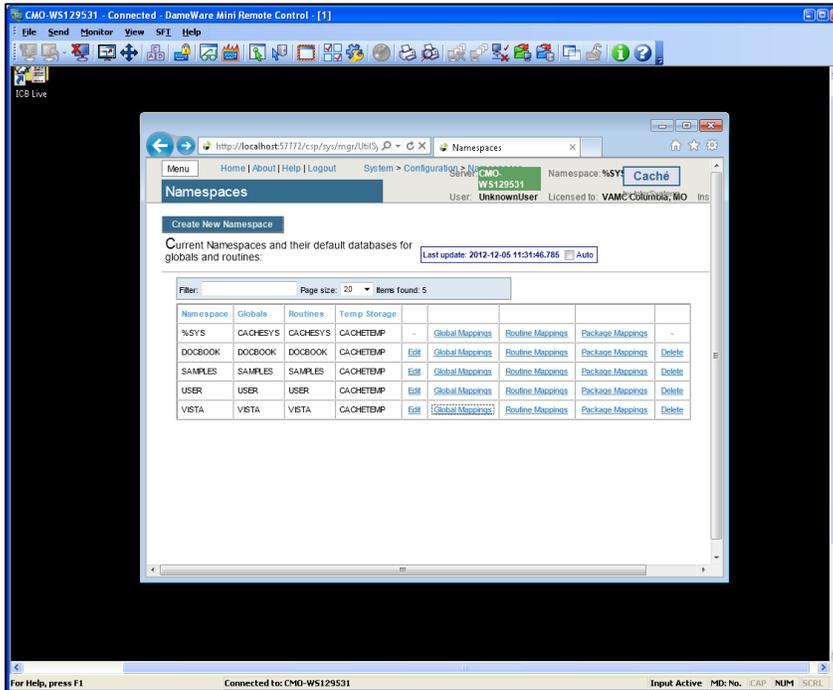
Figure 34: Mapping a New Global in a Namespace



5.1.5 Routine Mapping

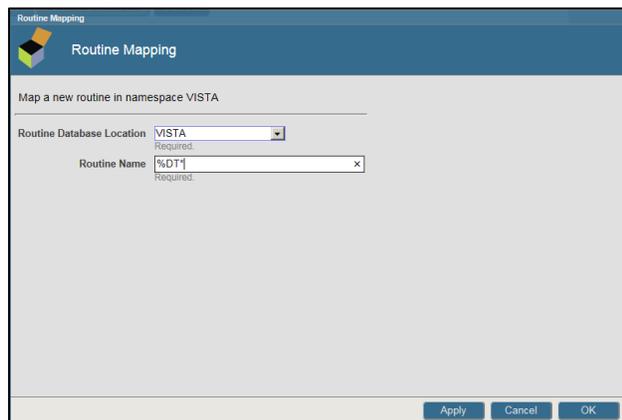
1. Select **Menu** from the Namespaces screen, then select **Configure Namespaces**.
2. Select **Routine Mapping** for the VISTA Namespace.

Figure 35: Routine Mapping



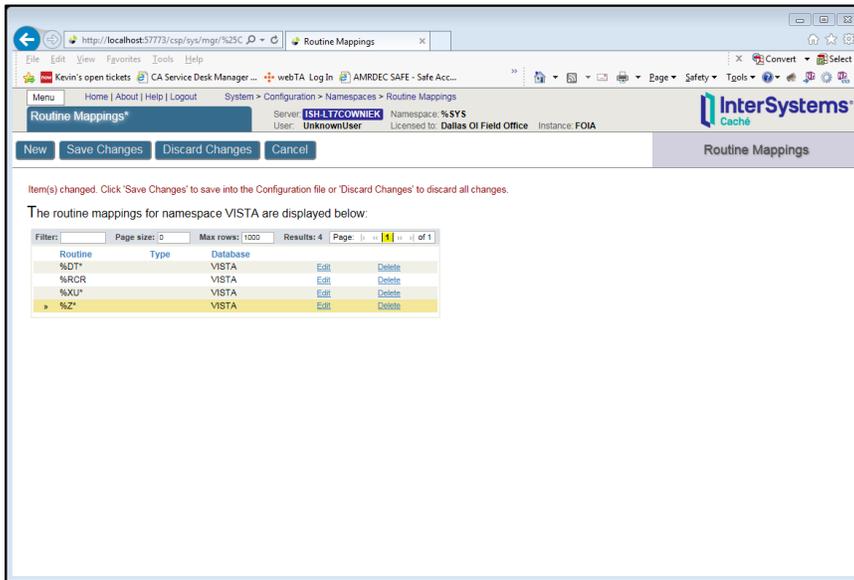
3. Select **New**.
4. Select **VISTA** as the Routine Database Location.
 - a. Enter the first routine name, **%DT***, in the Routine Name field and select **Apply**.
 - b. Enter, **%RCR**, as the second Routine Name and select **Apply**.
 - c. Enter, **%XU***, as the third Routine Name and select **Apply**.
 - d. Enter, **%Z***, as the fourth Routine Name and select **OK**.

Figure 36: Mapping a Routine in the VISTA Namespace



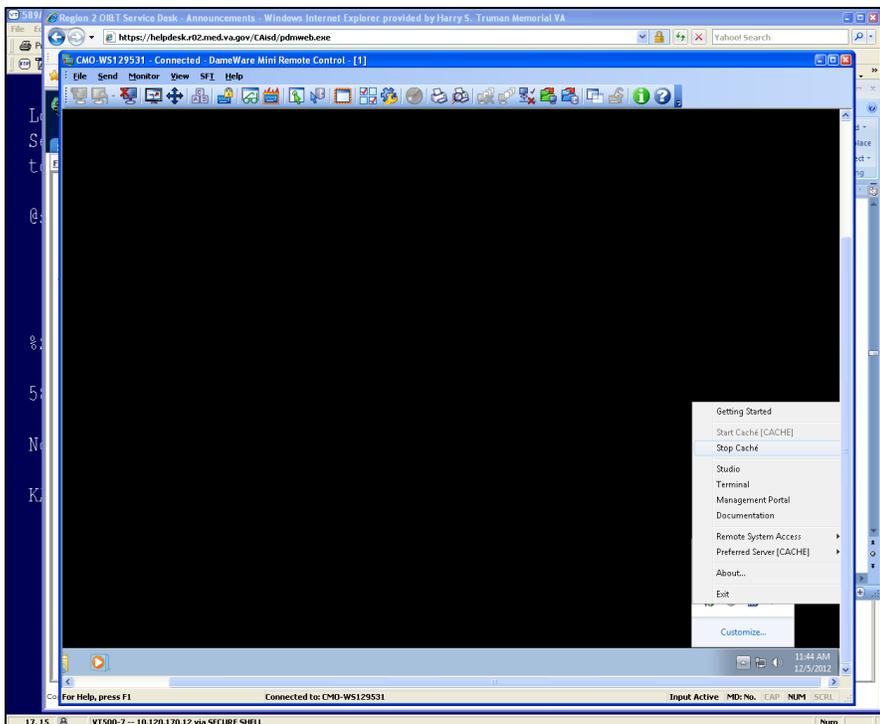
- When finished with all four entries, the routine mapping should appear as shown below. Select **Save Changes** and close the window.

Figure 37: New Routine List



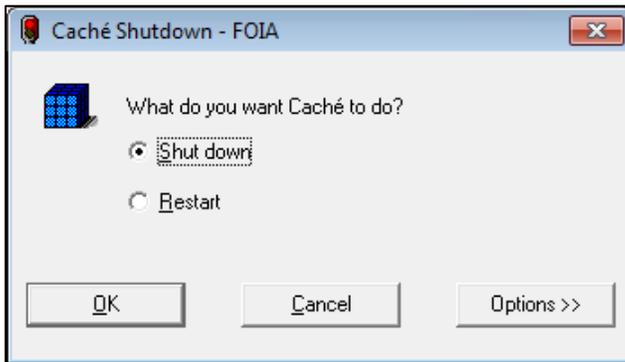
- Shut down CACHÉ by opening the menu options for the Blue Cube located in the System Tray, in the lower right hand corner of the screen, and select **Stop Cache**.

Figure 38: Stop Cache Menu Option

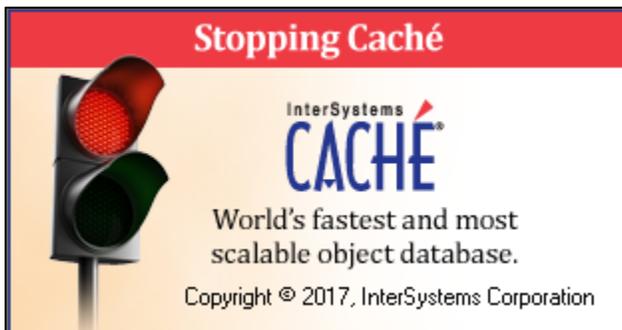


7. Select Shut down and select **OK**.

Figure 39: Cache Shutdown Dialog Box



Note: The following screen is displayed as CACHE shuts down.



5.1.6 Cache Licenses install

The license information is a text file sent by InterSystems (cache.key).

Copy and paste the text file into the **C:\InterSystems\Cache\mgr** folder.

5.1.7 Cache DAT File install

Copy the **CACHE.DAT** file that was downloaded from the VA SFTP site and place it in the **C:\BCMABU** folder. A message may display, stating that the file is already present, proceed with replacing it? If this message is displayed, then answer **YES**.

Note: The file is located on the same SFTP servers as the Cache software but is under the anonymous\software folder. The name of the file to download will be **BCBUCACHEV2014DATmmddy.zip**. Select the file with the latest date.

Note: The name of this file may change as patches/updates are applied.

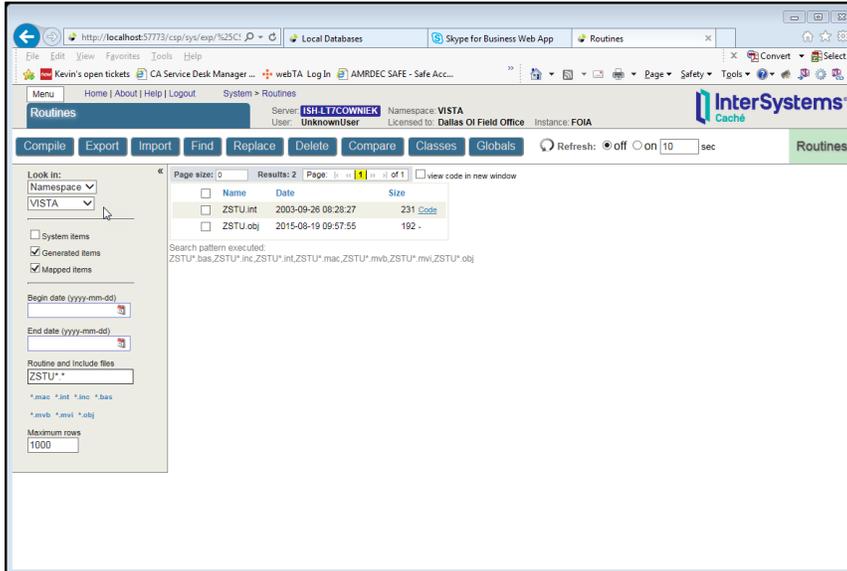
Start Cache back up by reopening the menu options for the now Grey Cube (it shows as a Blue Cube when Cache is running) in the System Tray. Select **Start Cache**.

5.1.8 Moving ZSTU routine

The next step is to move the **ZSTU** routine from the **VISTA** Namespace to the **%SYS** Namespace using the Management Portal.

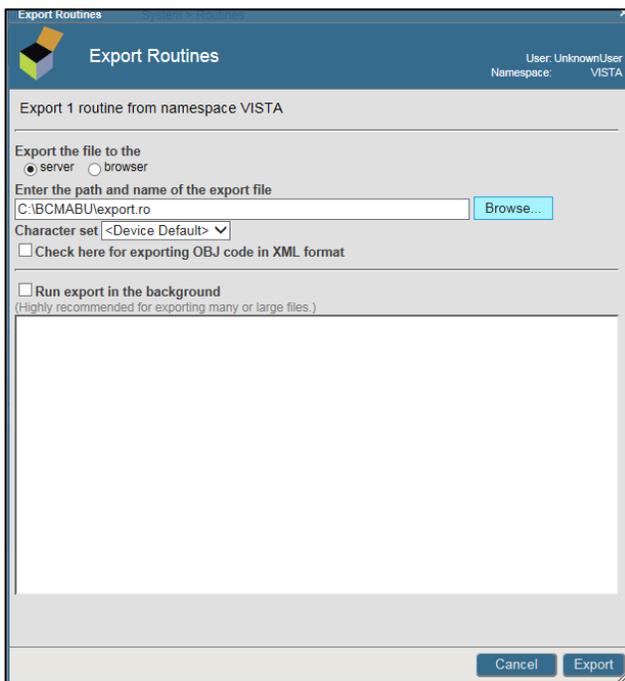
1. Select **Menu**, then select **View Routines**.

Figure 40: View Routines



2. Select the **VISTA** Namespace and enter **ZSTU*.*** in the Routines and include files box. The **ZSTU** routines will be listed. Check the box for **ZSTU.int** and select **Export**. The following screen will be displayed.

Figure 41: Export Routines



3. Select **Export**.
4. When finished, a message stating the process was completed should appear. Select **Done**.

Figure 42: Completed Export

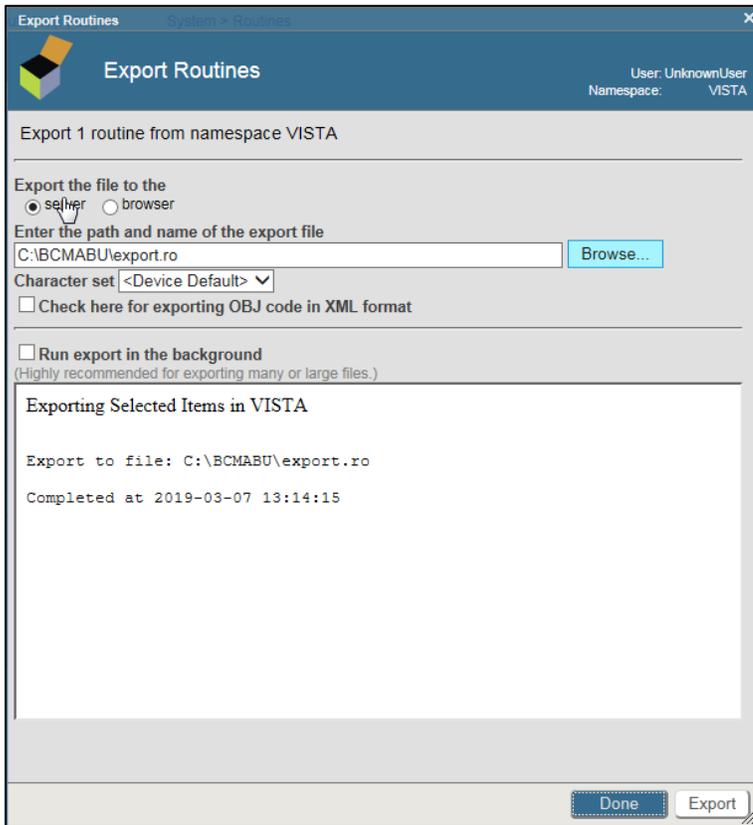
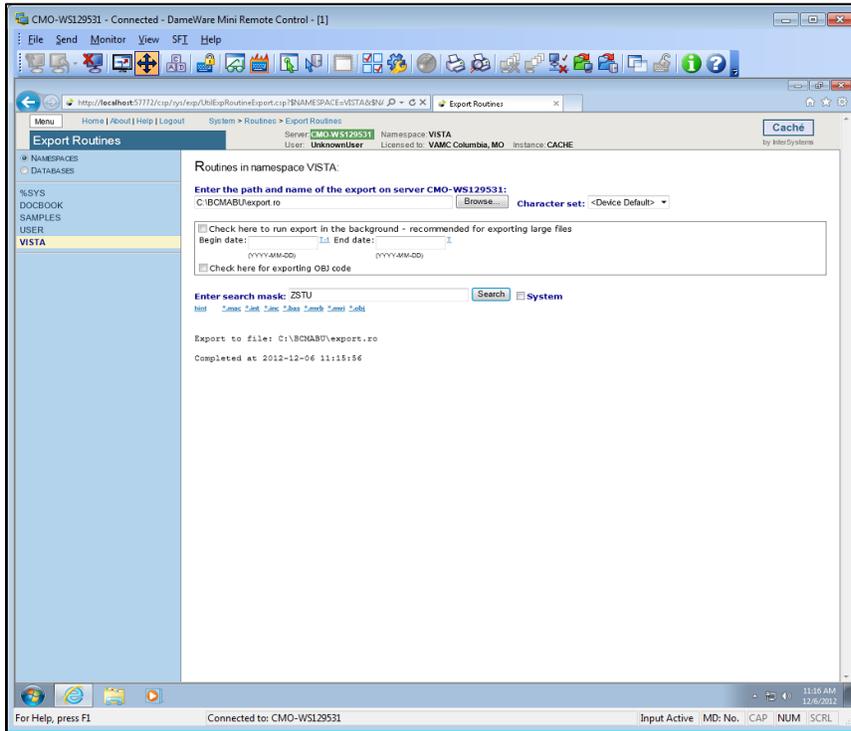
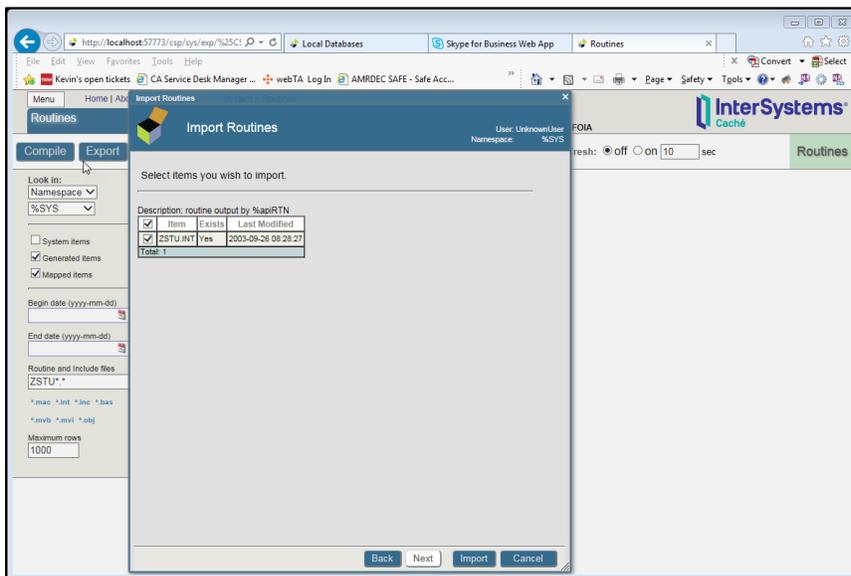


Figure 43: Exported Routine



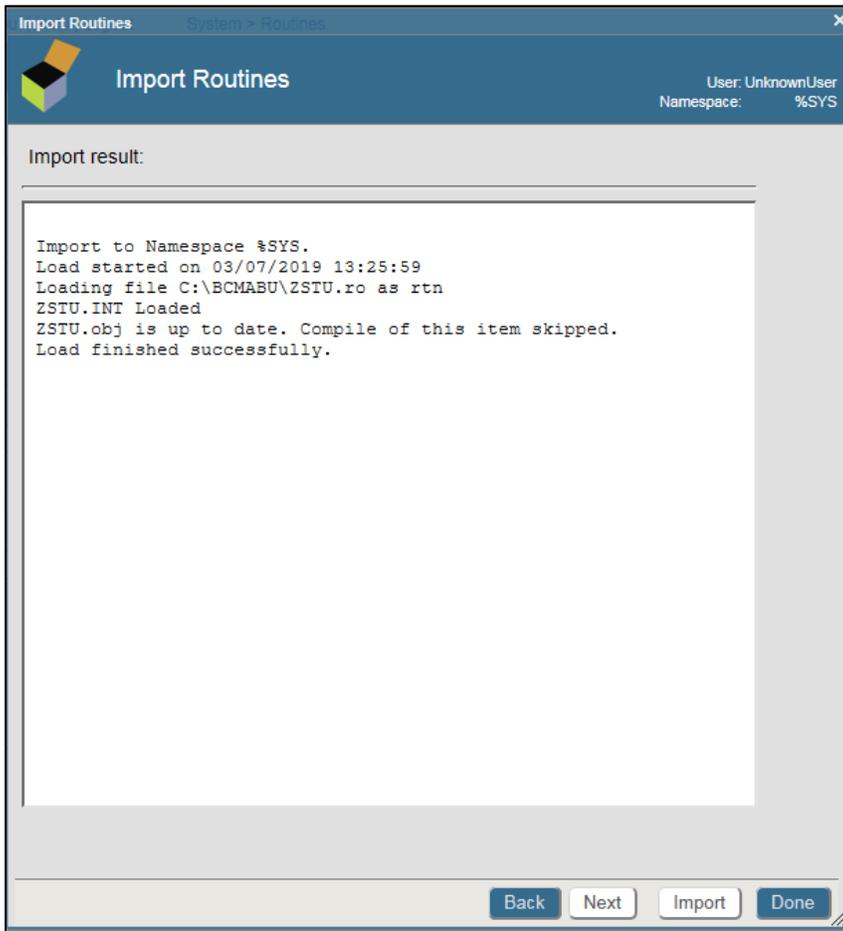
5. Select **Menu** and then select **View Routines**. See previous steps if needed. The **Look in** field should be set to **Namespace** and the **Namespace** should be **%SYS**. Select **Import** from across the top. Browse to the path of the exported routine (the default is C:\BCMABU). Select the file created in the export (if the name wasn't changed when saving, then the default will be export.ro). Select **Next**, then select **Import**.

Figure 44: Import Routines



- When complete the following screen will be display. Select **Done**.

Figure 45: Import Successful

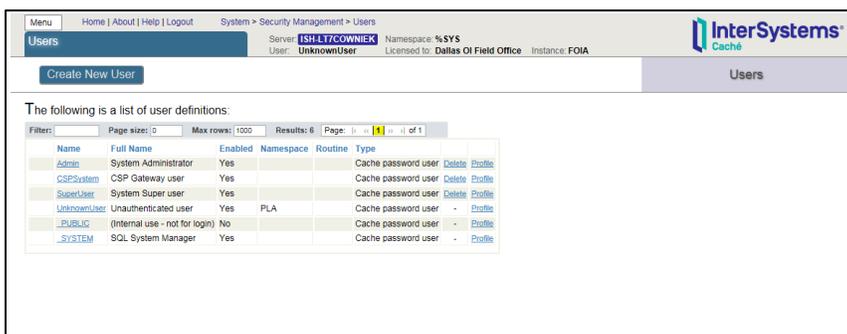


5.2 Setting up Terminal Users

Use the Management Portal to set up the Unknown User so the Terminal Users will connect to the VISTA namespace using the routine ZU.

- From the **Menu** select **Manage Users**. The User accounts will be displayed.

Figure 46: Manage Users



2. Select the **UnknownUser** to edit it. Select VISTA as the Startup Namespace and enter ^ZU as the Startup Tag^Routine. Select **Save** then close this window.

Note: For programmer access leave the Startup Tag^Routine blank.

Figure 47: Edit UnknownUser Account

The screenshot shows the 'Edit User' interface for 'UnknownUser'. The 'General' tab is selected, displaying the following configuration:

- Name: UnknownUser (Required)
- Full Name: Unauthenticated user
- Comment: (empty)
- Password: Enter new password (unchecked), Leave as is (checked)
- Change password on next login: (unchecked)
- Password never expires: (checked)
- User enabled: (checked)
- Expiration Date: (empty)
- Account Never Expires: (checked)
- Startup Namespace: VISTA (dropdown)
- Startup Tag^Routine: ^ZU
- Email Address: (empty)
- Mobile Phone Service Provider: (dropdown)
- Mobile Phone Number: (empty)
- Two-factor Authentication: (empty)

3. After the edits are complete the User account list will appear like **Figure 48**.

Figure 48: User Account List

The screenshot shows the 'Users' list page with the following table of user definitions:

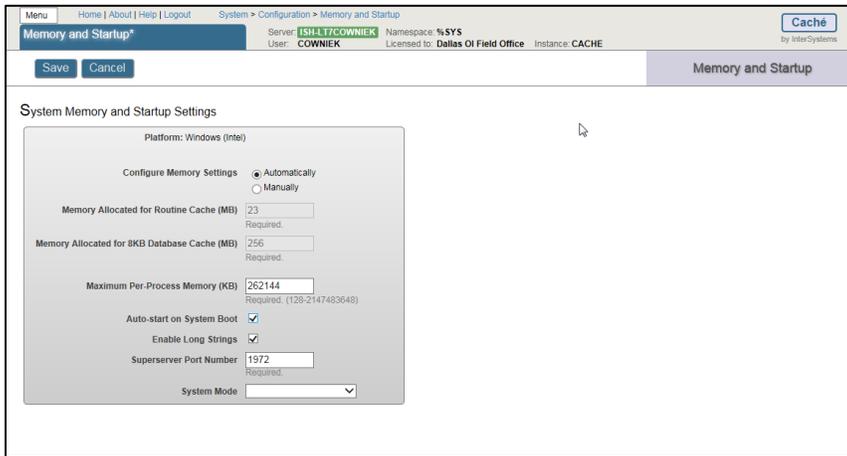
Name	Full Name	Enabled	Namespace	Routine	Type
Admin	System Administrator	Yes			Cache password user
CSPSystem	CSP Gateway user	Yes			Cache password user
SuperUser	System Super user	Yes			Cache password user
UnknownUser	Unauthenticated user	Yes	VISTA	^ZU	Cache password user
PUBLIC	(Internal use - not for login)	No			Cache password user
SYSTEM	SQL System Manager	Yes			Cache password user

IMPORTANT NOTE: Stop and restart Caché. This will be the BCMA Backup Application. The start-up routine ZSTU will automatically start up TaskManager.

5.3 Verify certain parameters are set for proper operation

1. From the Management Portal select **Menu**, then select **Configure Memory**.

Figure 49: System Memory Settings

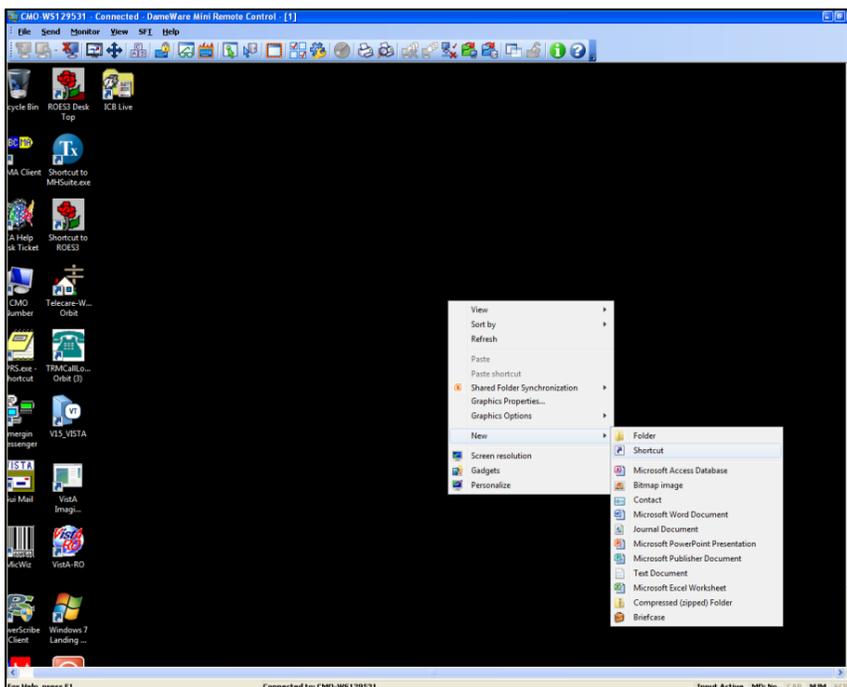


2. Make sure the **Auto-start on System Boot** is checked. If it is not, then check it and select **Save**. Close this window.

5.4 Setting up the BCMA Shortcut

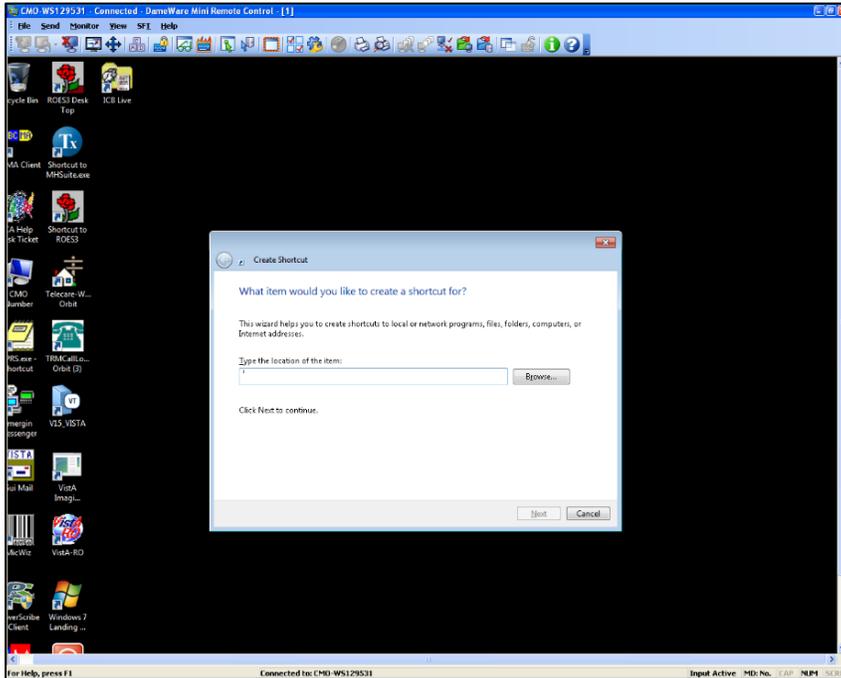
1. To create the shortcut, open the options menu anywhere on the desktop and select **New > Shortcut**.

Figure 50: Shortcut Menu Option



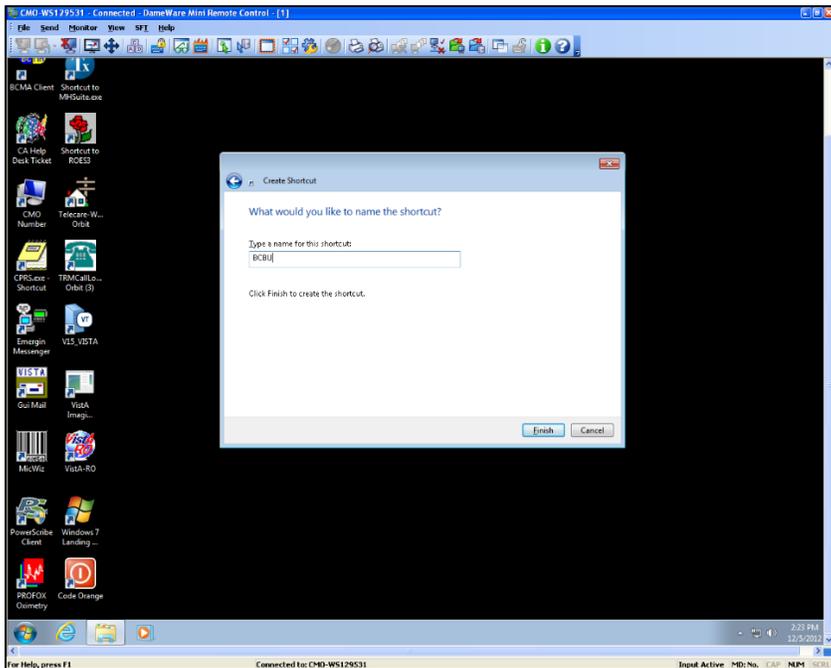
2. Enter **C:\InterSystems\Cache\bin\css.exe CTERMINAL CACHE** in the **Type the location of the item** box. Select **Next**.

Figure 51: Create Shortcut Location Dialog Box



3. Enter **BCBU** in the **Type a name for this shortcut**, and then select **Finish**.
4. Copy the Shortcut BCBU icon to the All User Desktop.

Figure 52: Create Shortcut Name Dialog Box



- Open the BCBU shortcut icon to enter the Backup system on the workstation (BCMA Backup in Figure 53). Use the appropriate access and verify code to access the system.

Figure 53: Example Workstation Desktop

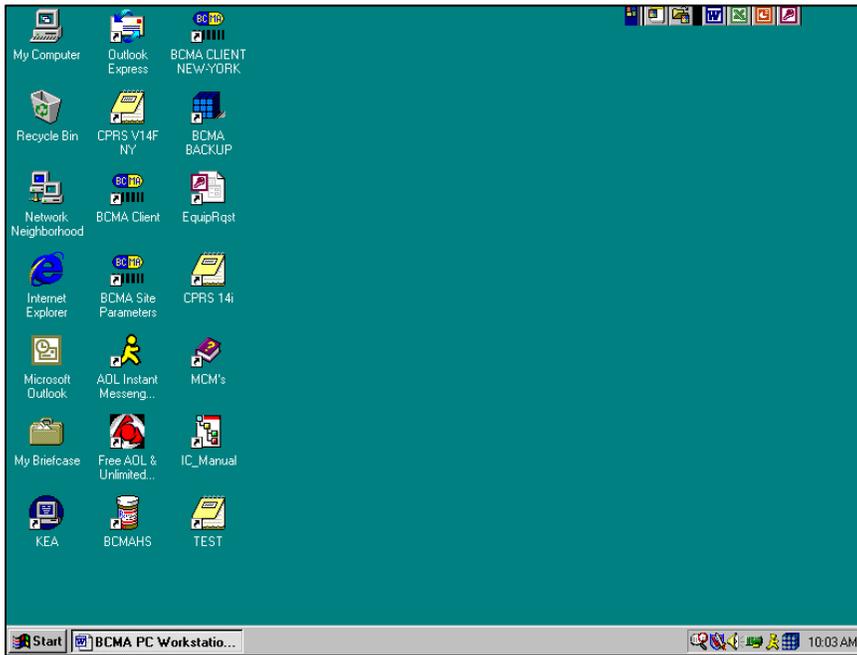
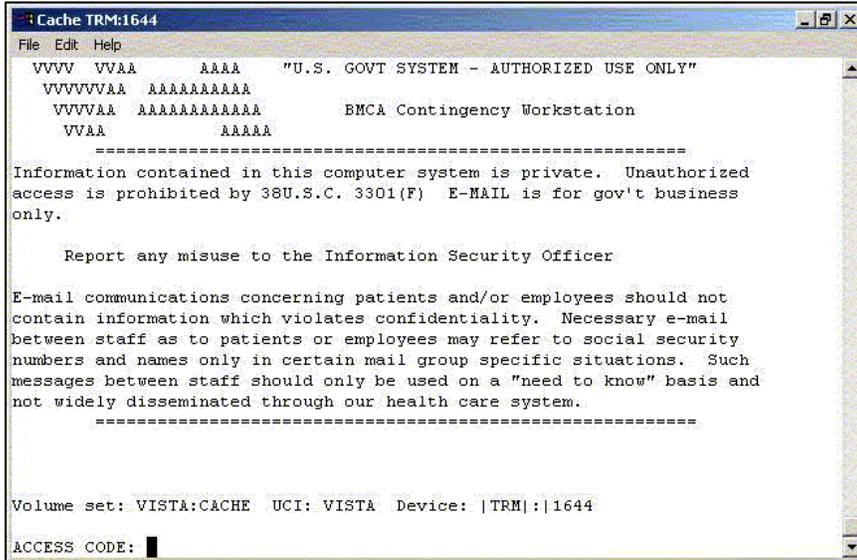


Figure 54: Opening the BCBU Shortcut



- This completes the setup of InterSystems Caché on the BCBU contingency workstation. Refer to the BCBU Vista Install Guide to complete the package setup.

5.4.1 Setting up the printer for use with BCBU

1. Connect the printer to the computer.
2. Install the Windows printer drivers.
3. Select the BCBU icon on the computer and log in as a user that has programmer privileges.
4. Select the Systems Manager Menu Option: **Device Management**
5. Select the Device Management Option: **Device Edit**
6. Select the Device Edit Option: **TRM, TRM, or VTRM Device Edit**
7. Select the Terminal/Printer Device: **BCBU**

5.4.2 Edit a TRM or VTRM device

```
NAME: BCBU PRINTER          LOCATION: BCBU WORKSTATION

      $I: |PRN| Name of the window's printer
Example: Window's printer is Lexmark T650 PS3, then enter |PRN|Lexmark T650 PS3

Edit a TRM or VTRM device

NAME: BCBU PRINTER          LOCATION: BCBU WORKSTATION
      $I: |PRN|Lexmark T650 PS3
Alt $I:
      TYPE: TERMINAL
SUBTYPE: P-HPLASER-P16

                                      SIGN-ON/SYSTEM DEVICE: NO
                                      VOLUME SET(CPU) :

      ASK DEVICE:                                MARGIN
WIDTH:
ASK PARAMETERS: NO                                PAGE LENGTH:

      QUEUING: ALLOWED                            SUPPRESS FORM FEED:

-----

COMMAND:

Save and Exit.
```